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ABSTRACT

This report examines costs of higher education in New Jersey, comparing the state's system of higher education and its individual sectors with national counterparts. The comparison takes into account such factors as differences in the cost of living and the size and relevant structural characteristics of a state's higher education system. In examining state resources allotted to the system, the report concludes that higher education in New Jersey is relatively well supported considering the small size of the system and the large proportion of students (38 percent) who attend college out of state, and notes that it is especially generous in the amount of funding provided for student assistance programs. Considering sector resources, the report concludes that although the state's percentage contribution to revenues for the state colleges, Rutgers University, and the University of Medicine and Dentistry of New Jersey is higher than average for identified peer states, New Jersey's percentage contribution to community colleges is below the national average. Considering sector spending, the report finds that spending by public research universities and independent institutions is less than peer institutions, but spending by state college and community college sectors is higher than at peer institutions. Text and tables provide detail for the study's findings. Appended is an explanation of the cost adjustment methodology. (Contains 15 endnotes.)(DB)

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ED 421 924

Higher Education Costs and Revenues

The Second Annual Systemwide Accountability Report

Adopted by the New Jersey Commission on Higher Education

May 1997

HE031 445

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EXECUTIVE SUMMARY

In October 1996, the Commission on Higher Education adopted *Looking to the New Millennium: New Jersey's Plan for Higher Education*. The plan includes a vision for the state's higher education system which emphasizes excellence, access, and affordability and stresses the importance of teaching, research, and public service in achieving the state's public policy goals. The plan also recognizes institutional and systemwide accountability as essential for achieving the vision.

Government and educational policy makers across the nation look to accountability measures in such areas as higher education quality, effectiveness, efficiency, and productivity to guide state planning, form a context for budget decisions, and monitor the return on public investment in colleges and universities. In New Jersey, annual institutional accountability reports and the Commission on Higher Education's systemwide accountability reports inform the public and provide valuable information for policy discussions and decisions.

Last year, the Commission's first accountability report provided a broad overview of New Jersey's higher education system and reported on performance indicators in various areas such as affordability, time to degree, equality of access, and return on the public investment in higher education. This year's report is a first attempt to look extensively at higher education costs, comparing New Jersey's system of higher education and its individual sectors with national counterparts. To provide an accurate comparison with revenue sources and spending patterns across the nation, a number of factors are taken into account, such as differences in cost of living and the size and relevant structural characteristics of a state's higher education system.

State Resources for the Higher Education System

The data included in this report indicate that higher education in New Jersey, compared to other states, is relatively well supported considering the small size of the system and the large proportion of students (38%) who attend college out of state. The long-standing pattern of outmigration in New Jersey can be attributed in part to the state's small geographic size and its relative affluence. Other influencing factors may be the large number of institutions within 30 miles of the state's borders and perceptions of institutional quality. The issue of outmigration will be addressed by the Blue-Ribbon Task Force to Study the Capacity of New Jersey's Higher Education System, which is expected to make recommendations to the Commission in January 1998. Nevertheless, it is important to recognize that New Jersey's high rate of outmigration indirectly affects the allocation of resources to higher education, because the size of the system and number of students it serves significantly affect resource requirements and the need for government funding.

The state is especially generous to higher education in the amount of funding provided for student assistance programs. A high proportion of the state's affluent

students attend out-of-state colleges; many of the remaining students require financial assistance, and the state has a long history of supporting access and affordability.

Sector Resources

The data on resources indicate that the state college sector, the independent college sector, UMDNJ, and Rutgers rely upon tuition and fees for a share of their costs at a level which is relatively consistent with their peer institutions. NJIT relies more heavily on tuition and fees than its peers, and at the community colleges, tuition and fees account for a share of total revenues that far exceeds their peer institutions.

While the state's percentage contribution to revenues for the state colleges, Rutgers, and UMDNJ is higher than the average for their identified peers, New Jersey's percentage contribution to revenues for community colleges is below the national average for peer institutions. Even when New Jersey's higher than average local government contributions are considered, the combined share of state and local support for New Jersey community colleges is significantly less than at peer institutions, causing considerable over-reliance on tuition and fee revenues.

Sector Spending

Generally the data on institutional levels of spending and allocation of resources indicate that New Jersey varies somewhat from peer institutions throughout the nation. New Jersey's public research universities and independent institutions spend less than their peers in most areas, while spending by the state college and community college sectors is higher in New Jersey than at peer institutions.

While lower than average spending in some areas may be interpreted as evidence of efficiency, low spending on research at New Jersey's public research universities is a cause for concern, because university-based research has a significant impact on the state's economic growth and competitiveness. Although New Jersey's public research universities are relatively young, and last year's accountability report demonstrated that Rutgers, NJIT, and UMDNJ had all made significant gains in the amount of research funding generated between FY 1983 and FY 1993, the institutions lag significantly behind their peers in research spending. Similarly, low spending on public service at independent and some of the public universities raises concerns, because all institutions have significant responsibilities for addressing critical state needs through public service.

Uses and Limitations of This Report

This first effort to compare higher education costs and resources at New Jersey, institutions with those of their peers in other states provides baseline data for future accountability reports. While the data are limited and open to varying interpretations, they provide valuable information which policy makers can use as they consider the level and allocation of resources for colleges and universities in New Jersey.

However, the comparative data in this report alone do not provide definitive answers to policy questions regarding higher education spending and resource allocation, nor do they address the kind of system the state wishes to support. Rather, the information is provided for use in planning to achieve New Jersey's vision for higher education excellence, access, and affordability. For example, knowing that New Jersey is supporting its higher education system at a level consistent with that of the national average is important information; it can assist in determining the level at which the state should support the higher education system in the future in order to achieve the excellent system it desires. Similarly, institutions can use the report's comparative data to guide their future budgeting decisions, consistent with state and institutional goals.

INTRODUCTION

Accountability Reporting in New Jersey

Since the enactment of the Higher Education Restructuring Act in July 1994, the New Jersey Commission on Higher Education and the state's colleges and universities have increased their emphasis on institutional and systemwide accountability. Their efforts to provide more information about higher education to policy makers and the public mirror activities throughout the nation.

Calls for accountability increased during the 1990s in all sectors of society, not just in higher education. Government, health care, and business are but a few examples of enterprises to come under intense public scrutiny, followed by radical restructuring. In this climate, it is not surprising that issues of higher education quality, productivity, and effectiveness have also become matters of public debate.

Traditionally, higher education accountability focused on campus-centered measures of academic quality (i.e., volumes available in libraries, percentage of faculty with terminal degrees, and faculty/student ratios). As public resources for colleges and universities decline, efforts are exerted to demonstrate the return on public investment in higher education. New Jersey is among a growing number of states to adopt accountability reporting systems that provide more information to citizens and policy makers about what higher education is achieving with public resources.

Throughout the country, colleges and universities are developing performance indicators that reflect their varying missions. As a result, there is a growing acceptance of benchmarking techniques that provide meaningful comparisons among institutions of similar types.

Under New Jersey's restructured governance for higher education, individual institutions have greater autonomy coupled with increased accountability requirements. In 1995, the public colleges and universities initiated annual reports that inform the public and state policy makers about the condition and progress of the institutions. The Commission on Higher Education commended the institutions on their accountability reporting efforts and called for enhanced cost accounting and outcome data in future reports to inform institutional and statewide planning and budgeting decisions. *New Jersey's Plan for Higher Education*, adopted by the Commission in October 1996, recommends that institutions increase their use of performance indicators as measures of progress toward their goals.

In addition, the New Jersey Presidents' Council formed a Committee on Advancement, Excellence, and Accountability Reporting which is undertaking a number of complementary efforts in institutional accountability.

The Commission prepares a systemwide accountability report each year to provide aggregate data and information on the various sectors and the system as a whole. The

first systemwide accountability report, adopted in March 1996, provided a broad overview of New Jersey's higher education system and reported on performance indicators in various areas including: affordability; retention, transfer, graduation, and time to degree; access and academic success; and return on the public investment in higher education.

At the time of the Commission's first report, members indicated a desire to focus the second systemwide accountability report on higher education cost data, comparing New Jersey's higher education system and the individual sectors to their national counterparts in regard to sources of revenue and spending levels and patterns. This is consistent with the emphasis in *New Jersey's Plan for Higher Education* on the efficient and effective use of public resources as a critical state issue which must be addressed by higher education.

Paying for Higher Education

Historians of higher education know that American colleges and universities have always faced fiscal challenges. While a small percentage of institutions are sufficiently endowed to be largely independent of public support, the vast majority of the nation's higher education institutions depend heavily upon federal, state, and/or local government appropriations, gifts and grants, and tuition and fees. The public sector is especially dependent upon the flow of state funds, and the private sector is similarly dependent on tuition. New Jersey public institutions depend on state and local government support for operating aid, capital funds, and need-based student assistance. Independent colleges and universities in New Jersey also benefit from limited state aid as well as state-funded student grants that help fill the gap between what a student can afford to pay and the cost of attending an institution.

Higher education funding and expenditures have an impact on almost all aspects of an institution; they also affect student access and affordability and the overall economic well-being of New Jersey. Yet, as college and university costs continue to rise and higher education faces greater competition for limited public resources, the public and policy makers appropriately ask many questions. For example, for each type of institution in New Jersey, how high are overall expenditures relative to the expenditures for similar institutions in other states? Are there particular components of New Jersey higher education, e.g., instruction, administration, and academic support services, that cost more or less in New Jersey than in similar institutions elsewhere, and if so, why?

The data in this systemwide accountability report assist in answering these questions and provide baseline information on the state's return on investment in higher education. This effort to examine comparative cost data is a new effort in New Jersey, with limited precedent in other states. The indicators were developed collaboratively with each sector and the individual public research universities.

This initial benchmarking effort calls for general precautions in interpreting the data. The comparative data in this report cannot be considered in isolation as a sole basis for setting policy. Rather, the data are intended to raise questions, inform policy and planning discussions, and indicate areas that need further study. Also, the institutions from which the comparative data were collected are not identical; while variations among institutions were lessened by comparing New Jersey colleges and universities with similar institutions in other states, differences that affect cost remain. For example, within a peer group, institutions emphasize different academic programs to varying degrees, and each institution has a unique mix of undergraduate/graduate students and residential/commuting students, all of which have cost implications. Finally, there may be shortcomings in the data for various reasons, such as imprecise data definitions. As benchmarking becomes a more widespread practice, techniques will be refined, enhancing the ability of institutions and the Commission to make more reliable and objective comparisons.

HIGHER EDUCATION REVENUES AND EXPENDITURES NEW JERSEY'S HIGHER EDUCATION SYSTEM IN A NATIONAL CONTEXT

OVERVIEW

Before examining the various sectors of New Jersey's higher education system, it is important to put the state's higher education revenues and expenditures into both a national and historical context.

According to figures in a recent report of the General Accounting Office,[1] since the academic year that began in fall 1980, public colleges nationwide increased their expenditures at a rate half again as high as the Consumer Price Index (CPI). Public colleges and universities also increased their expenditures beyond the rate of increase measured by the Higher Education Price Index (HEPI), which is based on prices of the goods and services purchased by higher education institutions. Growth in higher education costs has outpaced increases in personal income, which have barely kept pace with increases in the CPI.

A report by the National Center for Education Statistics[2] shows that between 1980 and 1992, the rate of increase in expenditures at independent colleges and universities exceeded that for public institutions. Among public institutions, expenditures at research universities increased the most, while two-year public colleges did not increase at all (**Table s1**).

Table s1:
Expenditures Per FTE Nationwide
(in Constant 1994 Dollars)

Type of Institution	1980	1992	Change
Private universities	$22,529	$32,242	43%
Other private 4-year colleges	$11,213	$15,029	34%
Public universities	$14,829	$17,246	16%
Other public 4-year colleges	$11,002	$11,654	6%
Public 2-year colleges	$5,759	$5,686	-1%

SOURCE: NCES, The Cost of Higher Education.

However, while there have been considerable and widely varying changes in the overall levels of spending in higher education, the patterns by which expenditures are distributed have remained fairly stable. In particular, the changes in the share devoted to instruction have been minimal (**Table s2**).

Table s2:
Instructional Spending as a Percentage of Total
Institutional Expenditures, Nationwide

Type and Control of Institution	1980	1992	Change
Private universities	37.9%	38.2%	0.3
Other private 4-year colleges	36.7%	33.1%	-3.6
Public universities	38.8%	36.0%	-2.8
Other public 4-year colleges	44.9%	43.2%	-1.7
Public 2-year colleges	50.3%	50.3%	0.0

SOURCE: NCES, The Cost of Higher Education.

COMPARING NEW JERSEY WITH SIX PEER STATES AND THE NATION

To provide a general sense of the fiscal picture for New Jersey's higher education system before examining the various sectors, the state's public higher education system as a whole is compared across a representative range of indicators to the United States and average data for six peer states--Connecticut, Massachusetts, New York, Pennsylvania, Virginia, and North Carolina. These states were selected for use as benchmarks for various reasons: Connecticut and Massachusetts are states that are demographically and economically similar to New Jersey; New York and Pennsylvania are neighboring states that receive many New Jersey students who opt to attend college out of state; and Virginia and North Carolina are eastern seaboard states with which New Jersey competes to attract industry.

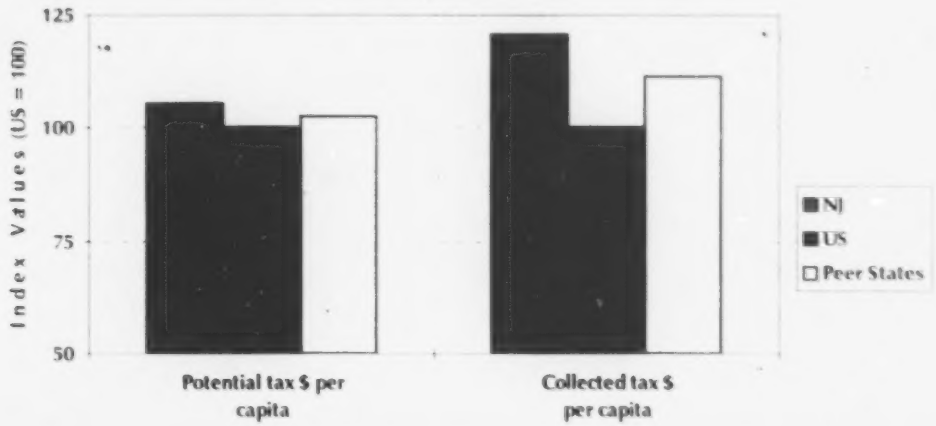
Higher Education Report Card, Kent Halstead's 1995 publication, is used for this endeavor because the report and its companion volumes are among the most widely recognized sources of information on the fiscal aspects of public higher education.

Three sets of comparisons are made, each involving several indicators that collectively shed light on one piece of the picture. Figures 1 through 6 compare New Jersey to peer states and/or the nation; they present the data as graphical representations in which the national average is converted to an index value of 100. Specific values for an individual state or group of states are expressed as a percentage compared to the index value. For example, New Jersey's index value for the cost of living is 113[3]. This means that New Jersey is 13 percent higher than the national average in cost of living. The use of index values makes comparisons more easily understood.

The fiscal resources of New Jersey

New Jersey and the six peer states surpass the nation in terms of general fiscal resources. Two different measures of state fiscal resources are represented in **Figure 1**; New Jersey and the peers exceed the U.S. on both measures.

Figure 1:
Two Indicators of State Fiscal Resources: FY 1994



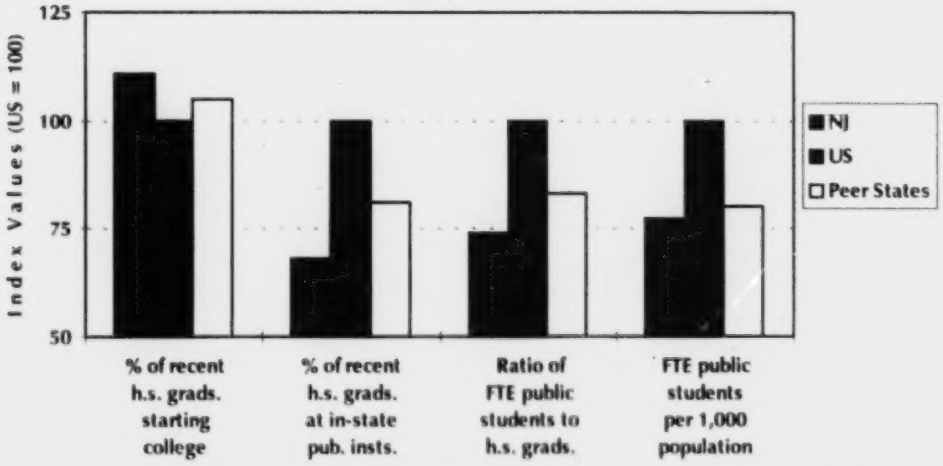
SOURCE: Kent Halstead, Higher Education Report Card 1995: Comparisons of State Public Higher Education Systems and National Trends, April 1995, p. 17.
NOTE: The indicators in Figure 1 and subsequent figures are indexed to a national value of 100. The values of the individual indicators cannot be compared to each other.

The pervasiveness of New Jersey's public higher education system

The need for government funding for higher education in a particular state is dependent, in part, on how large a presence the state's public higher education system has within the state. While New Jersey sends a higher proportion of its recent high school graduates to college, as compared with the nation and the peer states, it

lags behind in the various measures of the pervasiveness of its system (**Figure 2**). For example, a much smaller percentage of high school graduates in New Jersey attend public in-state institutions than in the peer states or the nation, reflecting New Jersey's high rate of outmigration (38% in 1994). This long-standing pattern is due, in part, to the state's small geographic size and the relative affluence of its population, as well as to the limited choice available within a relatively small higher education system.

Figure 2:
Four Indicators of Public Higher Education System Pervasiveness: Fall 1994



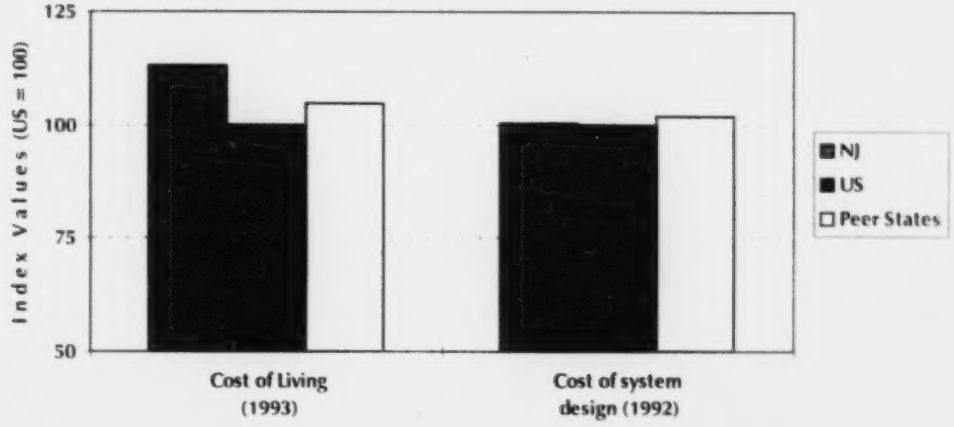
SOURCE: Kent Halstead, Higher Education Report Card 1995: Comparisons of State Public Higher Education Systems and National Trends, April 1995, pp. 61 (indicators 1 and 2) and 25 (indicators 3 and 4).

Background determinants of cost

When comparing public higher education costs in one state with those in other states and/or the nation as a whole, there are two sorts of background factors that should be taken into account. One is the overall cost of living that prevails in a given state in comparison with other states or the national average. While data are adjusted for cost-of-living variations, such adjustments may not fully compensate for differences such as employee unionization and energy needs. The other factor that determines cost is whether a state's public higher education system has high proportions of graduate students and/or upper division undergraduates (relatively more costly) or high proportions of lower division undergraduates (less costly).

Figure 3 shows that while New Jersey is considerably above the nation and the peer states in terms of the cost of living, the cost of New Jersey's higher education system design is quite average in national terms. The peer systems are somewhat more expensive, reflecting systems with greater proportions of graduate and/or upper division students. These background factors, and their use in adjusting data presented later in this report, are fully described in **Appendix A**.

Figure 3:
Two Background Determinants of Cost



SOURCE: Kent Halstead, Higher Education Report Card 1995: Comparisons of State Public Higher Education Systems and National Trends, April 1995, p. 29.

STATE SUPPORT FOR HIGHER EDUCATION

State funding for higher education has a significant impact on institutions, the higher education system, and the state as a whole. State funding levels affect institutional programs and services as well as tuition levels, and an inadequate level of state support can threaten higher education affordability, access, and choice of institutions. Ongoing government support of higher education is essential not only to students, but also to the state's economic well-being, which depends upon higher education's ability to develop the workforce and assist business and industry in maintaining New Jersey's economic competitiveness.

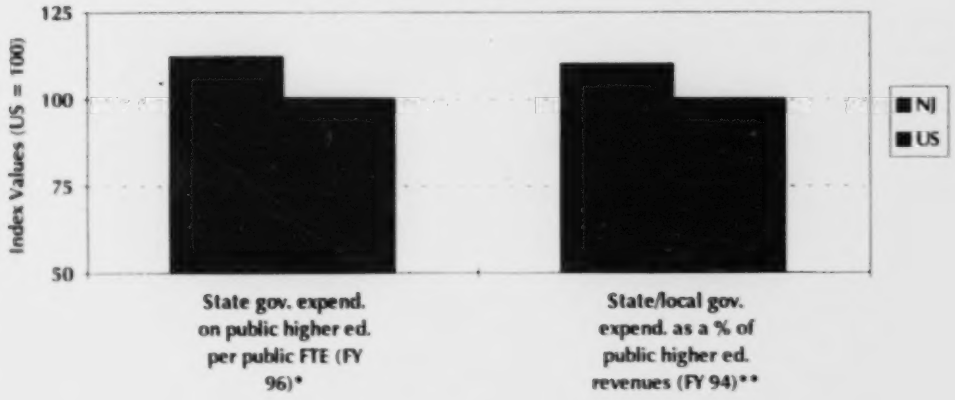
State government appropriations support institutional operating aid, student financial aid, capital expenditures, and grants and contracts. In many states, state support is augmented by local government appropriations for county colleges. In New Jersey, a relatively high proportion of state government appropriations for higher education is devoted to student assistance programs, reflecting the state's commitment to access and affordability. Specifically, in FY 1995, New Jersey was the fifth highest among all states in state financial aid grant dollars as a percentage of state funds for higher education (excluding capital). Student assistance dollars accounted for 13.5 % of the total state appropriations for colleges in New Jersey, compared with a national average of 7.3%.[4]

There are various ways to measure the level of state (or state and local) government funding for higher education. Some indicators are influenced by the size and other relevant characteristics of a state's higher education system, and therefore they need

to be adjusted to account for such factors. Numerous indicators of the level of government funding exist; five representative measures are presented in **Figures 4** and **5**. Both sets were adjusted for the cost of living where necessary.[5]

Figure 4 compares New Jersey and the nation on two indicators unaffected by the size of New Jersey's higher education system. New Jersey exceeds the national average in state government expenditures on public higher education per public full time equivalent student. Similarly, when state and local government contributions are compared to public higher education revenues, New Jersey exceeds the national average.

Figure 4:
Government Support for Higher Education – Two Indicators That Do Not Need Adjustment Beyond Cost of Living

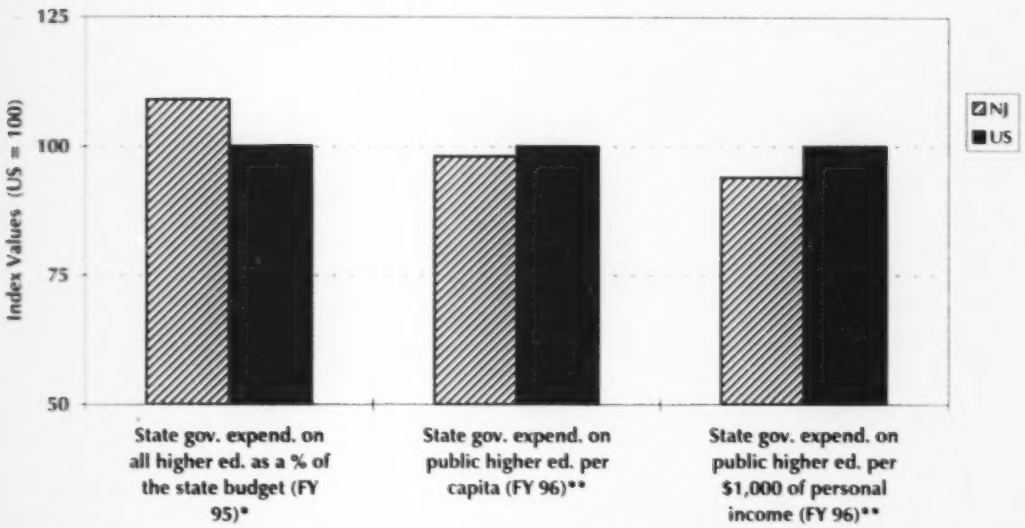

125
100
75
50
Index Values (US = 100)
NJ
US
State gov. expend. on public higher ed. per public FTE (FY 96)*
State/local gov. expend. as a % of public higher ed. revenues (FY 94)**

* State government expenditures on public higher education include operating aid for public institutions, as well as state-funded financial aid for students attending those institutions, minus state expenditures for research, agriculture, public health care, and medical schools. Capital funding by the state is excluded. The data are adjusted for cost of living. Calculated from data in Kent Halstead, State Profiles: Financing Public Higher Education, 1996 Rankings, September 1996, p. 32.

** Revenues are both restricted and unrestricted. Revenues from state and local governments include appropriations, grants, and contracts. The denominator consists of total current fund revenues minus revenues from sales and services of educational activities, auxiliary enterprises, hospitals, other sources, and independent operations. Calculated from data in National Center for Education Statistics, Digest of Education Statistics 1996, November 1996, p. 339.

Figure 5 presents three size-related indicators. All have been adjusted to account for the high student outmigration from (and low inmigration into) New Jersey, the size of the state's public higher education system relative to its independent sector, and variations among states in the mix of state and local government funding for community colleges. In addition, the first indicator has been adjusted for whether a state includes tuition revenues in the portion of the state budget devoted to higher education. (Forty-one states do so; New Jersey is one of nine that do not.)[6]

Figure 5:
Government Support -- Three Indicators Adjusted for Size and Other Characteristics of the Higher Education System


125
100
75
50
Index Values (US = 100)
NJ
US
State gov. expend. on all higher ed. as a % of the state budget (FY 95)*
State gov. expend. on public higher ed. per capita (FY 96)**
State gov. expend. on public higher ed. per $1,000 of personal income (FY 96)**

* This indicator includes all state government expenditures for higher education, encompassing operating aid to -- and financial aid for students at -- both public and independent institutions. State capital funding is contained as well. Original indicator (before special adjustments for size and other factors) is from National Association of State Budget Officers, 1995 State Expenditure Report, April 1996, p. 78.

** State government expenditures on public higher education include operating aid for public institutions, as well as state-funded financial aid for students attending those institutions, minus state expenditures for research, agriculture, public health care, and medical schools. Capital funding by the state is excluded. The data were previously adjusted for the cost of living. Original indicators 2 and 3 (before special adjustments for size and other factors) are calculated from data in Kent Halstead, State Profiles: Financing Public Higher Education, 1996 Rankings, September 1996, p. 32; original indicator 3 also uses data from Kent Halstead, State Profiles: Financing Public Higher Education, 1978 to 1995, October 1995, p. 34.

New Jersey is close to the national average in all three measures of state support for higher education exhibited in **Figure 5**. When appropriate adjustments are made, it is above the national average in terms of state government spending on higher education as a percentage of the state budget. New Jersey is slightly below average in terms of state government expenditures on public higher education per capita, and the state is also slightly below the national average in terms of state government spending on public higher education per $1,000 of personal income.

While New Jersey has a particularly strong commitment to student assistance programs, this factor alone does not account for New Jersey's relatively high level of state support for higher education. When state-funded student assistance is included, New Jersey's state support for higher education (both public and independent) per FTE is 16% above the nation, after adjustment for the cost of living. Even when student assistance is excluded from the comparison, state support for higher education in New Jersey is still 8% above the nation.[7]

State government expenditures on capital, included in the first item in Figure 5, fluctuate dramatically from year to year. In FY 1995 (the year examined in the first item in Figure 5), New Jersey devoted 2.6% of total higher education expenditures to capital, lagging behind the national average of 5.4%. However, in the two prior years, New Jersey exceeded the national average: in FY 1994 New Jersey devoted 9.0% of total higher education expenditures to capital versus 7.1 % for the nation; in FY 1993, New Jersey devoted 10.0% versus a national average of 4.7%. Hence, any comparisons of resources devoted to capital funding must proceed with caution.

Although annual growth in the amount of state support for higher education has slowed substantially, New Jersey has fared considerably better than states both in the Middle Atlantic region and throughout the nation when state funding levels are examined over time. As indicated in **Table s3,** all three saw significant gains in higher education funding between 1977 and 1987; the percentage increase in New Jersey far exceeded the region and the nation. In later years, New Jersey saw small gains in higher education funding, while the region and the nation both experienced declines in state appropriations.

Table s3:
Changes in State Appropriations for Higher Education Operations:*
New Jersey, the Region, and the Nation

Time Periods	NJ	Region**	US
1977 - 1987	38.8%	7.9%	18.5%
1987 - 1992	2.2%	-6.2%	-2.4%
1992 - 1994	0.8%	-3.1%	-4.6%

SOURCE: Daniel T. Layzell, "Developments in State Funding for Higher Education," Higher Education: Handbook of Theory and Research, Vol. XI, 1996.

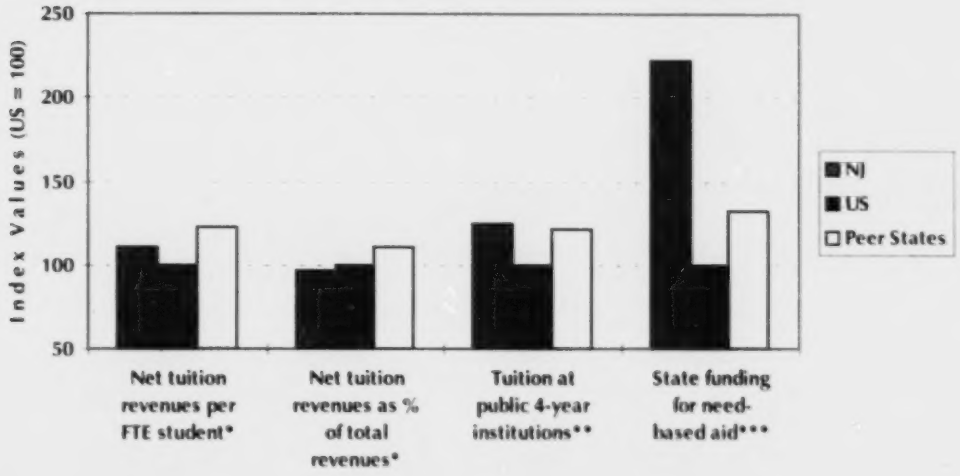
* Data adjusted by the Higher Education Price Index.

** The Middle Atlantic region includes Delaware, Maryland, New Jersey, New York, and Pennsylvania.

THE COST OF ATTENDING COLLEGE IN NEW JERSEY

The cost of a college education is of major concern to students and parents, the higher education community, policy makers, and the public. New Jersey is a relatively high-cost state in terms of actual tuition amounts. New Jersey also provides one of the highest levels of state support for student aid in the nation (see **Figure 6**). In order to gauge the real financial burden of tuition on students and families, the first two indicators used in this analysis measure net tuition revenues, which exclude state-funded student assistance dollars.

Figure 6:
Four Indicators of Tuition and Need-Based Aid: FY 1995 and 1996



SOURCES: Kent Halstead, State Profiles: Financing Higher Education, 1996 Rankings, September 1996, p. 24 (indicators 1 and 2); Higher Education Report Card 1995: Comparisons of State Public Higher Education Systems and National Trends, April 1995, pp. 53 (indicator 3), and 45 (indicator 4).

* Numerator consists of public institutions' revenues from tuition and fees, minus state financial aid expenditures for students at those institutions, adjusted for the cost of living in New Jersey; data are for FY 1996.

** Tuition levels shown, in contrast to those in the published source, have been adjusted for cost-of-living differentials; data are for FY 1995.

*** This indicator is derived from the amount of aid available to the amount required by the estimated potential undergraduate enrollment of needy resident youth at in-state public four-year institutions; data are for FY 1995.

When financial aid is excluded, New Jersey is above the nation in tuition revenues per student, but slightly below the nation in tuition revenue as a percentage of total revenues for higher education (**Table s4** and **Figure 6**). The peer states exceed New Jersey and the nation in both indicators.

Table s4:

Public Institution Tuition in New Jersey

NET TUITION REVENUES PER STUDENT*

	1981	1986	1991	1996
Dollars (1996 constant $)	1,381	1,742	2,365	2,668
Index value (US=100)	--	--	--	111

TUITION AS A SHARE OF TUITION/STATE/LOCAL REVENUES**

	1981	1986	1991	1996
Percent	21.3	20.8	27.7	30.7
Index value (US=100)	99	90	106	97

TUITION RELATIVE TO INCOME***

	1981	1986	1991	1996
Ratio	3.8	4.2	5.2	6.3
Index value (US=100)	88	86	97	92

SOURCE: Kent Halstead, State Profiles: Financing Public Higher Education, 1978 to 1996 Trend Data, pp. 63-64.

* *Net tuition revenues per student* is net tuition and fee revenues of public institutions per annual FTE public student. Net tuition revenues are tuition revenues minus state-appropriated student financial aid and tuition waived. NJCHE has adjusted the published 1996 index value both for interstate differences in the cost of living and for interstate differences in system requirements (i.e., the mix of lower division undergraduates, upper division undergraduates, and graduate students). Comparably adjusted index values for previous years cannot be computed.

** *Tuition as a share of tuition/state/local revenues* is the ratio of student net tuition revenues to the sum of state and local government higher education appropriations plus net tuition revenues.

*** *Tuition relative to personal income* is the ratio of public net tuition revenues per FTE student to median family income.

Table s5:

Changes from FY 1978 to FY 1996 in Three Indicators of Public Institution Tuition:*
New Jersey vs. Six Peer States and the Nation

	US	NJ	NY	PA	CT	MA	VA	NC
Net tuition revenues per student:								
% change	60.7	77.6	35.0	65.3	112.1	64.8	84.5	21.0
Rank**	--	16	37	20	5	21	13	44
Tuition as a share of tuition/state/local revenues:								
% change	51.5	48.8	58.2	50.6	66.6	69.1	57.6	6.3
Rank**	--	20	15	19	12	9	16	45
Tuition relative to income:								
% change	50.9	43.7	26.7	45.2	94.4	36.6	63.1	9.7
Rank**	--	25	36	24	6	29	17	43

SOURCE: Kent Halstead, State Profiles: Financing Public Higher Education, 1978 to 1996 Trend Data, p. 3.

* Data adjusted by the Higher Education Price Index.

** Ranks are of the 48 contiguous states; they are in descending order, i.e., the largest percentage increase is ranked #1, the next largest, #2, etc.

The data in **Table s5** indicate that when adjusted for inflation, tuition revenues per student increased by 78% over the past 18 years in New Jersey, more than the rate of increase in four peer states (Pennsylvania, Massachusetts, New York and North Carolina), but less than increases in two other peer states (Connecticut and Virginia). Among all states, New Jersey had the 16th highest percentage increase in tuition revenues per student over the 18-year period from FY 1978 to FY 1996.

In New Jersey and across the nation, increases in revenues from tuition outstripped increases in revenues from state and local government appropriations over the past 18 years. However, tuition as a share of total revenues from tuition and government appropriations grew proportionally less in New Jersey than it did nationally over the same period. One of the peer states had a smaller increase in tuition revenues versus state and local government appropriations, while the other five peer states had a larger increase.

Similarly, while tuition revenue per student in New Jersey relative to median family income increased over the past 18 years, it increased by a smaller proportion in New Jersey than nationally. Three of the peer states had a larger proportional increase than New Jersey; the other three experienced a smaller increase.

These indicators demonstrate that although tuition has increased at New Jersey colleges and universities, consuming a larger part of a family's income and requiring greater savings and/or reliance on grants and loans, as a group New Jersey's public institutions are less dependent on tuition revenues to cover increasing costs than institutions nationally and in most of the peer states.

HIGHER EDUCATION REVENUES AND EXPENDITURES NEW JERSEY SECTORS COMPARED WITH THEIR PEER INSTITUTIONS

INTRODUCTION

While it is useful to compare New Jersey's higher education system with others in the nation, it is most instructive to examine revenue and spending patterns for institutions of similar types. Accordingly, this section examines revenues and costs for New Jersey college and university sectors in relation to peers across the nation. The three public research universities are examined individually in relation to their peers. Rutgers, the State University of New Jersey, New Jersey Institute of Technology (NJIT), and the University of Medicine and Dentistry of New Jersey (UMDNJ) have such distinct missions and different groups of peer institutions that it is inappropriate to analyze their revenue and spending patterns as a group.

Two types of comparative data are used in this section. The report compares each sector or public research university to its national peers for fiscal year 1994 (academic year 1993-94), the most recent year for which national data are available. These data are adjusted to reflect variations in regional cost of living (adjustment procedures are described in **Appendix A**). This section also compares data for each sector or public research university over time, examining changes in revenue and expenditure distributions from fiscal year 1989 to fiscal year 1994.[8]

Capital expenditures are not included in this analysis because comparable national data are not available . Nevertheless, it is important to recognize that capital needs and expenditures can have a significant impact on academic quality as well as on an institution's overall allocation of resources.

This report does not make comparisons between the different sectors or types of institutions in New Jersey. Such comparisons are neither instructive nor appropriate because of variations in costs due to fundamental differences in missions. Therefore, different indicators and cost ratios are examined for each sector.

Employee compensation is analyzed separately for each sector or public research university because faculty and staff salaries are included in all spending categories. Further, unlike most of the other spending data included in this report, the employee compensation data include both restricted and unrestricted expenditures.

Tuition data in this section include all tuition revenue, irrespective of whether it is paid by students and families or through state or federal student assistance.

Most tables are limited to unrestricted current funds, which are funds for day-to-day operations that have no limitations or stipulations placed on them by external agencies or donors. Restricted funds, such as grants or contracts for specific work or certain scholarships, do have externally established limitations or stipulations placed on their use.

Components of Unrestricted Educational and General (E&G) Expenditures

ACADEMIC AREA	SUPPORT AREA	
• Instruction: General academic instruction Vocational and technical instruction Special session instruction Community education Preparatory and remedial instruction **• Research:** Institutes and research centers Individual and project research **• Public Service:** Community service Cooperative extension service Public broadcasting services	**• Academic Support:** Libraries Museums and galleries Educational media services Academic computing support Ancillary support Academic administration Academic personnel development Course and curriculum development **• Institutional Support:** Executive management Fiscal operations General administration and logistical services Administrative computing support Public relations Development	**• Student Services:** Student services administration Social and cultural development Counseling and career guidance Financial aid administration Student admissions Student records Intramural athletics Student organizations **• Operation and Maintenance of Plant:** Physical plant administration Building maintenance Custodial services Utilities Landscape and grounds maintenance
SCHOLARSHIPS AND FELLOWSHIPS	**OTHER EXPENDITURES**	
• Outright grants to students: Federal grants State grants Institutional grants Etc. **• Trainee stipends for students:** Federal stipends Institutional stipends Etc.	**• Mandatory transfers from current funds:** Mandatory debt service relating to academic and administrative buildings Etc. **• Nonmandatory (discretionary) transfers from current funds:** Voluntary renewals and replacement of plant Prepayments on debt principal Etc.	

SOURCE: National Center for Education Statistics, Intergrated Postsecondary Education Data System, Finance Survey 1994, "General Instructions." For further information, see National Association of College and University Business Officers, Financial Reporting and Accounting Manual, and American Institute of Certified Public Accountants, Audit Guide for Colleges and Universities.

THE STATE COLLEGE SECTOR

New Jersey's state college sector is comprised of nine public four-year nondoctoral institutions: The College of New Jersey, Jersey City State College, Kean College of New Jersey, Montclair State University, Ramapo College of New Jersey, The Richard Stockton College of New Jersey, Rowan University, Thomas Edison State College, and William Paterson College of New Jersey. Educational costs at these institutions are funded by the state and student tuition and fees. Thomas Edison State College is excluded from the data reported here because of its unique funding structure as an institution providing adult students with alternative methods of achieving a collegiate education.

These institutions emphasize undergraduate education that culminates in a baccalaureate degree. Most of the institutions also offer programs of graduate study leading to a master's degree, and one has an approved doctoral degree. While the institutions in the state college sector are not fundamentally research-oriented, the faculty engage in scholarship and research that enhance their teaching and public service endeavors. Their peer group is composed of all regionally accredited public four-year nondoctoral institutions across the nation.

Institutions in New Jersey's state college sector spent a total of $388 (5%) more per full-time equivalent (FTE) student[9] than did similar institutions throughout the nation (**Table sc1**). New Jersey institutions outspent their peers by $450 per FTE student in the support category and by $134 per FTE student in the academic category. New Jersey institutions spent somewhat less than their national counterparts for scholarships and fellowships and "other" expenditures.

Table sc1:
Components of FY 1994 Unrestricted E & G Expenditures per FTE:
Public Four-Year Nondoctoral Institutions

	US*	NJ-Unadj.	NJ-Adj.
Subtotal, academic area	**$3,660**	**$4,287**	**$3,794**
Instruction	$3,518	$4,150	$3,673
Research	$47	$34	$30
Public service	$95	$103	$91
Subtotal, support area	**$3,219**	**$4,146**	**$3,669**
Academic support	$715	$674	$597
Student services	$640	$794	$703
Institutional support	$1,028	$1,422	$1,258
Operation & maintenance of plant	$836	$1,256	$1,111
Scholarships & fellowships	**$179**	**$117**	**$104**
Other	**$330**	**$236**	**$209**
TOTAL	**$7,388**	**$8,786**	**$7,776**

* US data include New Jersey.

Both New Jersey institutions and their peers devoted a slightly larger share of their expenditures to the academic area than to the support area (**Table sc2**), but New Jersey institutions devoted a larger share of expenditures to the support area than their peers and a smaller share to scholarships and fellowships and "other" expenditures.

Table sc2:
Components of Unrestricted E & G Expenditures as Percentages of the Total:
Public Four-Year Nondoctoral Institutions

	FY 1989		FY 1994		Change	
	US*	NJ	US*	NJ	US*	NJ
Subtotal, academic area	**51.6%**	**48.7%**	**49.5%**	**48.8%**	**-2.1%**	**0.1%**
Instruction	49.8%	47.5%	47.6%	47.2%	-2.1%	-0.3%
Research	0.6%	0.2%	0.6%	0.4%	0.0%	0.2%
Public service	1.2%	1.0%	1.3%	1.2%	0.1%	0.2%
Subtotal, support area	**43.8%**	**43.5%**	**43.6%**	**47.2%**	**-0.3%**	**3.7%**
Academic support	9.6%	6.4%	9.7%	7.7%	0.0%	1.3%
Student services	7.7%	8.7%	8.7%	9.0%	1.0%	0.3%
Institutional support	14.2%	16.2%	13.9%	16.2%	-0.2%	0.0%
Operation & maintenance of plant	12.4%	12.1%	11.3%	14.3%	-1.1%	2.2%
Scholarships & fellowships	**1.7%**	**0.6%**	**2.4%**	**1.3%**	**0.7%**	**0.7%**
Other	**2.8%**	**7.2%**	**4.5%**	**2.7%**	**1.6%**	**-4.6%**
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* US data include New Jersey

When changes in expenditure patterns are analyzed over time, spending in the academic area remained constant as a share in New Jersey but declined slightly across the nation. During the five-year period from FY 1989 to FY 1994, the support area grew somewhat in New Jersey while remaining constant nationally. Spending on the "other" category declined by 4.6 percentage points in New Jersey but grew nationally.

New Jersey's state colleges spent about $103 (2%) more per FTE student on employee compensation (including benefits) than their national peers (**Table sc3**) and devoted a slightly larger share of total expenditures to this category. The average salary for faculty at the state colleges (excluding benefits) was 4.5% higher than that of the peer institutions.

Table sc3:
FY 1994 Employee Compensation (Restricted Plus Unrestricted Funds):
Public Four-Year Nondoctoral Institutions

	US*	NJ-Unadj.	NJ-Adj.
Dollars per FTE enrolled	$6,008	$6,905	$6,111
% of total E & G expenditures	65.2%	68.9%	68.9%

* US data include New Jersey

In fiscal year 1994, institutions in New Jersey's state college sector received a larger share of their revenues from state government appropriations and a smaller share from tuition and fees than their peer institutions nationally (**Table sc4**). Between the

1989 and 1994 fiscal years, tuition and fees rose as a share of revenues, and state appropriations declined in both settings, reflecting a nationwide trend. The decrease in the state funding share was slightly less in New Jersey than elsewhere, as was the increase in the share of revenues from tuition and fees.

Table sc4:
Sources of Unrestricted Revenues:
Public Four-Year Nondoctoral Institutions

	FY 1989		FY 1994		Change	
	US*	NJ	US*	NJ	US*	NJ
Tuition and fees	**26.6%**	**24.7%**	**36.7%**	**33.5%**	**10.1%**	**8.7%**
Government appropriations						
Federal	0.7%	0.0%	0.8%	0.0%	0.2%	0.0%
State	68.0%	71.9%	57.7%	64.0%	-10.4%	-8.0%
Local	1.5%	0.0%	1.0%	0.0%	-0.4%	0.0%
Government grants and contracts						
Federal	0.3%	0.0%	0.4%	0.1%	0.1%	0.0%
State	0.2%	0.6%	0.2%	0.1%	0.0%	-0.5%
Local	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%
Private gifts, grants and contracts	**0.3%**	**0.1%**	**0.6%**	**0.1%**	**0.3%**	**0.0%**
Endowment income	**0.1%**	**0.0%**	**0.1%**	**0.2%**	**0.0%**	**0.2%**
Other sources	**2.4%**	**2.6%**	**2.5%**	**2.2%**	**0.1%**	**-0.5%**
TOTAL**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* US data include New Jersey.
** Excludes sales and services of educational activities, auxiliary enterprises, hospitals and independent operations.

The Community College Sector

New Jersey has 19 two-year community colleges, each serving one or more of the state's 21 counties: Atlantic Community College, Bergen Community College, Brookdale Community College, Burlington County College, Camden County College, Cumberland County College, Essex County College, Gloucester County College, Hudson County Community College, Mercer County Community College, Middlesex County College, County College of Morris, Ocean County College, Passaic County Community College, Raritan Valley Community College, Salem Community College, Sussex County Community College, Union County College, and Warren County Community College. Educational costs are funded by the state, the county, and student tuition and fees.

New Jersey's community colleges offer a broad spectrum of associate degree, diploma, and certificate programs, as well as a variety of continuing education and

training programs and customized training for business and industry. Their peer group is composed of all regionally accredited public two-year colleges in the nation.

New Jersey community colleges spent a total of $7 (5%) more per credit hour[10] than did similar institutions throughout the nation (**Table cc1**). This difference is primarily due to greater spending in the support category, where New Jersey institutions outspent their counterparts by $9 per credit hour. New Jersey did not differ appreciably from the nation in the other spending categories.

Table cc1:
Components of FY 1994 Unrestricted E & G Expenditures per Credit:
Public Two-Year Institutions

	US*	NJ-Unadj.	NJ-Adj.
Subtotal, academic area	**$72**	**$82**	**$73**
Instruction	$70	$77	$69
Research	$0	$0	$0
Public service	$2	$5	$4
Subtotal, support area	**$60**	**$78**	**$69**
Academic support	$11	$13	$12
Student services	$13	$16	$14
Institutional support	$21	$28	$25
Operation & maintenance of plant	$15	$21	$18
Scholarships & fellowships	**$1**	**$0**	**$0**
Other	**$2**	**$1**	**$1**
TOTAL	**$136**	**$162**	**$143**

* US data include New Jersey.

New Jersey community colleges devoted slightly less than half of all expenditures to the support area and slightly more than half to the academic area; among the peer institutions the academic area received slightly more in comparison, and the support area slightly less (**Table cc2**). When changes in expenditure patterns are analyzed over time (from FY 1989 to FY 1994), the share of spending in the academic area gained slightly while the support area declined slightly at both the New Jersey colleges and the peer institutions.

When the size of institutions is considered, New Jersey community colleges that enroll more than 10,000 students spent more overall than did their size peers, as did the state's community colleges that enroll 5,000-10,000 students. The smallest community colleges in New Jersey spent about the same as their peers.

Table cc2:
Components of Unrestricted E & G Expenditures as Percentages of the Total:
Public Two-Year Institutions

	FY 1989		FY 1994		Change	
	US*	NJ	US*	NJ	US*	NJ
Subtotal, academic area	**52.1%**	**49.5%**	**53.2%**	**50.9%**	**1.1%**	**1.5%**
Instruction	50.7%	46.7%	51.9%	47.9%	1.2%	1.2%
Research	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%
Public service	1.3%	2.6%	1.2%	2.8%	-0.2%	0.2%
Subtotal, support area	**45.6%**	**49.0%**	**44.4%**	**48.2%**	**-1.2%**	**-0.8%**
Academic support	8.7%	8.1%	8.5%	8.2%	-0.3%	0.2%
Student services	8.5%	9.3%	9.2%	9.7%	0.7%	0.5%
Institutional support	16.2%	18.6%	15.6%	17.3%	-0.6%	-1.2%
Operation & maintenance of plant	12.1%	13.1%	11.1%	12.9%	-1.0%	-0.2%
Scholarships & fellowships	**0.5%**	**0.1%**	**0.8%**	**0.2%**	**0.2%**	**0.2%**
Other	**1.7%**	**1.5%**	**1.6%**	**0.6%**	**-0.1%**	**-0.8%**
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* US data include New Jersey.

New Jersey community colleges spent about $5 (4%) more per credit hour for employee compensation (including benefits) than their national peers (**Table cc3**). This category comprised about two-thirds of community college expenditures nationally, and a few percentage points more in New Jersey. The average salary for faculty at the state's community colleges (excluding benefits) was 5.8% higher than that of the peer institutions.

Table cc3:
FY 1994 Employee Compensation (Restricted Plus Unrestricted Funds):
Public Two-Year Institutions

	US*	NJ-Unadj.	NJ-Adj.
Dollars per credit enrolled	$117	$138	$122
% of total E & G expenditures	67.4%	71.5%	71.5%

* US data include New Jersey.

New Jersey community colleges received a smaller share of their revenues from state government appropriations and a greater share from local government than their counterparts nationally (**Table cc4**). When these two sources are combined, the joint government contribution was 12 percentage points lower in New Jersey than in peer states, while revenues from tuition and fees were 14 percentage points higher.

Table cc4:
Sources of Unrestricted Revenues:
Public Two-Year Institutions

	FY 1989		FY 1994		Change	
	US*	NJ	US*	NJ	US*	NJ
Tuition and fees	**20.6%**	**30.0%**	**26.3%**	**39.8%**	**5.7%**	**9.8%**
Government appropriations						
Federal	0.3%	0.2%	0.3%	0.0%	0.0%	-0.1%
State	51.6%	30.4%	46.5%	23.6%	-5.1%	-6.7%
Local	22.2%	35.8%	22.7%	33.2%	0.4%	-2.6%
Government grants and contracts						
Federal	0.2%	0.2%	0.3%	0.1%	0.1%	0.0%
State	1.4%	0.1%	0.5%	0.1%	-0.9%	0.0%
Local	0.3%	0.2%	0.2%	0.0%	-0.1%	-0.2%
Private gifts, grants and contracts	**0.2%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**
Endowment income	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**
Other sources	**3.1%**	**3.2%**	**2.8%**	**3.1%**	**-0.3%**	**-0.1%**
TOTAL**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* US data include New Jersey.
** Excludes sales and services of educational activities, auxiliary enterprises, hospitals and independent operations.

During the five-year period, tuition and fees increased as a share of revenues, while state appropriations declined in both settings (**Table cc4**), reflecting a nationwide trend. However, New Jersey community colleges' increased reliance on tuition and fees and their decreased share of funding from the state were somewhat greater than in other states, and this trend was joined by a drop in the local funding share that was not seen elsewhere.

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

Rutgers, The State University of New Jersey, is a comprehensive research university offering undergraduate, graduate, and post graduate programs on campuses in New Brunswick, Camden, and Newark. Rutgers provides programs in nearly 100 major fields of study, conducts significant research, and undertakes various community service initiatives. Educational costs are funded by the state, tuition and fees, and other sources.

Rutgers' peer institutions are the other public members of the Association of American Universities (AAU). However, Rutgers' unique geographic makeup -- three widely separated locations and five distinct campuses in New Brunswick -- differs substantially from its peer institutions: University of Arizona - Tucson, University of California - Berkeley, University of California - Davis, University of

California - Irvine, University of California - Los Angeles, University of California - Santa Barbara, University of California - San Diego, University of Colorado - Boulder, University of Florida - Gainesville, University of Illinois - Urbana/Champaign, Indiana University - Bloomington, Iowa State University - Ames, University of Iowa - Iowa City, University of Kansas - Lawrence, University of Maryland - College Park, Michigan State University - East Lansing, University of Michigan - Ann Arbor, University of Minnesota - Minneapolis, University of Missouri - Columbia, University of Nebraska - Lincoln, University of North Carolina - Chapel Hill, Ohio State University - Columbus, University of Oregon - Eugene, Pennsylvania State University - University Park, University of Pittsburgh - Pittsburgh, Purdue University - W. Lafayette, State University of New York - Buffalo, University of Texas - Austin, University of Virginia - Charlottesville, University of Washington - Seattle, and University of Wisconsin - Madison.

Rutgers spent $3,002 (22%) less per fall headcount student[11] overall than did its peer institutions (**Table ru1**). Lower spending in the academic category ($1,569 less per student) accounts for slightly over half of this difference, while lower spending in the support category ($899 less per student) is the second largest contributor to the difference. Rutgers also spent less than its peers on scholarships and fellowships and on "other" expenditures.

Table ru1:
Components of FY 1994 Unrestricted E & G Expenditures per Student:
Rutgers University vs. AAU

	AAU*	RU-Unadj.	RU-Adj.
Subtotal, academic area	**$7,598**	**$6,827**	**$6,029**
Instruction	$6,043	$5,318	$4,696
Research	$979	$933	$824
Public service	$576	$577	$509
Subtotal, support area	**$4,830**	**$4,452**	**$3,931**
Academic support	$1,727	$951	$840
Student services	$666	$692	$611
Institutional support	$1,149	$1,083	$956
Operation & maintenance of plant	$1,288	$1,726	$1,524
Scholarships & fellowships	**$630**	**$309**	**$272**
Other	**$743**	**$642**	**$567**
TOTAL	**$13,801**	**$12,230**	**$10,799**

* AAU data in all charts include all public members in the US except Rutgers.

Table ru2:
Components of Unrestricted E & G Expenditures as Percentages of the Total:
Rutgers University vs. AAU

	FY 1989		FY 1994		Change	
	AAU	RU	AAU	RU	AAU	RU
Subtotal, academic area	**57.3%**	**53.5%**	**55.0%**	**55.8%**	**-2.2%**	**2.4%**
Instruction	45.2%	40.8%	43.8%	43.5%	-1.4%	2.6%
Research	7.3%	7.6%	7.1%	7.6%	-0.2%	0.0%
Public service	4.8%	5.0%	4.2%	4.7%	-0.6%	-0.3%
Subtotal, support area	**35.9%**	**38.9%**	**35.0%**	**36.4%**	**-0.9%**	**-2.5%**
Academic support	12.3%	9.4%	12.5%	7.8%	0.2%	-1.6%
Student services	5.0%	5.7%	4.8%	5.7%	-0.2%	-0.1%
Institutional support	8.8%	10.2%	8.3%	8.9%	-0.5%	-1.3%
Operation & maintenance of plant	9.8%	13.6%	9.3%	14.1%	-0.5%	0.5%
Scholarships & fellowships	**3.1%**	**1.6%**	**4.6%**	**2.5%**	**1.5%**	**0.9%**
Other	**3.7%**	**6.0%**	**5.4%**	**5.2%**	**1.7%**	**-0.8%**
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

Although Rutgers' expenditure levels were lower than their peers', the distribution of expenditures among categories was similar (**Table ru2**). The academic area outweighed all other expenditure categories combined for both Rutgers and the peers; the support area comprised over one-third of expenditures for both. The academic area gained slightly as a share for Rutgers over time, but declined slightly among the peers. The support area declined modestly over time in both contexts, but slightly more so for Rutgers. "Other" expenditures increased slightly for the peers, but diminished slightly for Rutgers.

Rutgers spent $4,255 (32%) less per student on employee compensation (including benefits) than its peer institutions, and this category comprised a slightly smaller share of expenditures for Rutgers than for the peer institutions (**Table ru3**). However, Rutgers' average salary for faculty (excluding benefits) exceeds that of its public sector AAU peers by 4.9%.

Table ru3:
FY 1994 Employee Compensation (Restricted Plus Unrestricted Funds):
Rutgers University vs. AAU

	AAU	RU	RU-Adj.
Dollars per student enrolled	$13,256	$10,193	$9,001
% of total E & G expenditures	65.3%	64.5%	64.5%

Total research expenditures per full-time faculty member were $29,178 (39%) less for Rutgers than for its peer institutions (**Table ru4**). Public service expenditures per full-

time faculty members were $6,777 (39%) less for Rutgers. Being one of the few AAU public institutions without a medical school may impact Rutgers' lower research and public service funding; it is also a younger state university than most of its peers, so its ability to attract federal grants and private gifts and grants is still developing.

Table ru4:
FY 1994 Research and Public Service Expenditures per Fall 1993 Full-Time Faculty
(Restricted Plus Unrestricted Funds):
Rutgers University vs. AAU

	AAU	RU-Unadj.	RU-Adj.
Total Research	$74,668	$51,518	$45,490
Total Public Service	$17,198	$11,802	$10,421

Rutgers, as compared with its peers, received a larger share of its revenues from state government appropriations (**Table ru5**). Its share of revenue from tuition and fees is only slightly smaller than its peers. In both settings, tuition and fees rose as a share of revenues and state appropriations declined. The decrease in the state funding contribution for Rutgers was somewhat less than for the peers, and the increase in the tuition/fee share was slightly less for Rutgers. Rutgers, with an Agricultural Experiment Station, received a slightly larger share of revenues from federal appropriations than did the peer institutions, although it derives a smaller share of its revenue from unrestricted federal grants and contracts.

Table ru5:
Sources of Unrestricted Revenues:
Rutgers University vs. AAU

	FY 1989		FY 1994		Change	
	AAU	RU	AAU	RU	AAU	RU
Tuition and fees	**26.7%**	**26.8%**	**33.7%**	**32.7%**	**7.0%**	**5.9%**
Government appropriations						
Federal	0.3%	1.3%	0.4%	1.2%	0.0%	0.0%
State	61.7%	66.9%	52.1%	59.1%	-9.6%	-7.8%
Local	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government grants and contracts						
Federal	5.8%	1.7%	6.8%	3.1%	1.1%	1.4%
State	0.1%	0.0%	0.4%	0.1%	0.2%	0.0%
Local	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Private gifts, grants and contracts	**1.5%**	**0.6%**	**1.9%**	**0.6%**	**0.5%**	**0.0%**
Endowment income	**0.5%**	**0.6%**	**1.0%**	**0.4%**	**0.5%**	**-0.2%**
Other sources	**3.3%**	**2.2%**	**3.6%**	**2.9%**	**0.3%**	**0.7%**
TOTAL*	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* Excludes sales and services of educational activities, auxiliary enterprises, hospitals and independent operations.

New Jersey Institute of Technology (NJIT)

New Jersey Institute of Technology (NJIT) is the state's public comprehensive technological university with a main campus in Newark and extension sites across the state. The university offers undergraduate and graduate programs through its five schools: Newark College of Engineering, the School of Architecture, the College of Science and Liberal Arts, the School of Management, and the Albert Dorman Honors College. In addition, NJIT conducts research and offers continuing education and pre-college programs. Educational costs are funded by the state, tuition and fees, and other sources.

NJIT's peer institutions are Georgia Institute of Technology, North Carolina State University, Texas A & M University, Purdue University, Carnegie Mellon University, and Rensselaer Polytechnic Institute. These peers were selected because of their similarity to NJIT in terms of program and size, even though they are not all public institutions. Carnegie Mellon and Rensselaer are excluded from the revenue data (**Table nj5**), because as independent institutions, they cannot be compared to NJIT with respect to sources of funding.

NJIT spent a total of $2,978 (22%) less per fall headcount student[12] than did its peer institutions (**Table nj1**). Lower spending in the academic area ($3,788 less per student) accounts for all of the difference, and offsets NJIT's higher spending (by $591 per student) in the support area. Spending in the "other" category was also higher at NJIT than among the peers, while spending on scholarships and fellowships was about the same.

Table nj1:
Components of FY 1994 Unrestricted E & G Expenditures per Student:
NJIT vs. Peer Institutions

	Peers	NJIT-Unadj.	NJIT-Adj.
Subtotal, academic area	**$8,677**	**$5,481**	**$4,889**
Instruction	$6,098	$4,916	$4,385
Research	$1,568	$374	$333
Public service	$1,011	$191	$171
Subtotal, support area	**$3,888**	**$5,021**	**$4,479**
Academic support	$966	$1,342	$1,197
Student services	$363	$631	$563
Institutional support	$1,324	$1,784	$1,591
Operation & maintenance of plant	$1,234	$1,265	$1,128
Scholarships & fellowships	**$484**	**$556**	**$496**
Other	**$374**	**$651**	**$581**
TOTAL	**$13,423**	**$11,710**	**$10,445**

In FY 1994, the academic area accounted for less than half of all expenditures for NJIT, but almost two-thirds for the peers (**Table nj2**). The support area comprised over two-fifths of expenditures for NJIT, but less than one-third for the peers. These shares of overall expenditures remained fairly constant for NJIT and the peers during the five years from FY 1989 to FY 1994, although the percentage devoted to support at NJIT did decline slightly during that period.

Table nj2:
Components of Unrestricted E & G Expenditures as Percentages of the Total:
NJIT vs. Peer Institutions

	FY 1989		FY 1994		Change	
	Peers	NJIT	Peers	NJIT	Peers	NJIT
Subtotal, academic area	**66.6%**	**46.9%**	**64.6%**	**46.8%**	**-1.9%**	**-0.1%**
Instruction	44.1%	42.8%	45.4%	42.0%	1.3%	-0.8%
Research	14.0%	3.0%	11.7%	3.2%	-2.3%	0.2%
Public service	8.4%	1.2%	7.5%	1.6%	-0.9%	0.5%
Subtotal, support area	**28.7%**	**45.6%**	**29.0%**	**42.9%**	**0.3%**	**-2.7%**
Academic support	7.2%	12.8%	7.2%	11.5%	0.0%	-1.4%
Student services	2.3%	5.5%	2.7%	5.4%	0.5%	-0.1%
Institutional support	8.8%	16.7%	9.9%	15.2%	1.1%	-1.5%
Operation & maintenance of plant	10.4%	10.6%	9.2%	10.8%	-1.2%	0.2%
Scholarships & fellowships	**2.2%**	**3.5%**	**3.6%**	**4.7%**	**1.4%**	**1.2%**
Other	**2.6%**	**4.0%**	**2.8%**	**5.6%**	**0.2%**	**1.6%**
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

NJIT spent about $2,826 (25%) less per student on employee compensation (including benefits) than did the peer institutions (**Table nj3**). Average salary for faculty at NJIT (excluding benefits) was 1.4% less than that of their peer institutions.

Table nj3:
FY 1994 Employee Compensation (Restricted Plus Unrestricted Funds):
NJIT vs. Peer Institutions

	Peers	NJIT-Unadj.	NJIT-Adj.
Dollars per student enrolled	$11,458	$9,677	$8,632
% of total E & G expenditures	59.5%	61.2%	61.2%

Total research expenditures per full-time faculty were $32,807 (33%) less for NJIT than for the peers (**Table nj4**). Public service expenditures, calculated in the same manner, were $25,983 (86%) less for NJIT.

Table nj4:
FY 1994 Research and Public Service Expenditures per Fall 1993 Full-Time Faculty
(Restricted Plus Unrestricted Funds):
NJIT vs. Peer Institutions

	Peers	NJIT-Unadj.	NJIT-Adj.
Total Research	$99,391	$74,646	$66,584
Total Public Service	$30,272	$4,808	$4,289

NJIT, as compared with its public sector peers, received a somewhat smaller share of its revenues from state government appropriations, and a significantly larger share from tuition and fees (**Table nj5**). Between 1989 and 1994, tuition and fees rose as a share of revenues in both settings, but slightly more at NJIT. State appropriations declined in both settings, but considerably more at NJIT.

Government grants and contracts increased slightly for both NJIT and the peer institutions during the five-year period, although the percentage of such revenue among the peer institutions is double the percentage at NJIT. The peers also receive a larger share of revenue from "other" sources, although this gap did close somewhat over time.

Table nj5:
Sources of Unrestricted Revenues:
NJIT vs. Peer Institutions

	FY 1989		FY 1994		Change	
	Peers	NJIT	Peers	NJIT	Peers	NJIT
Tuition and fees	**22.1%**	**33.4%**	**24.1%**	**36.9%**	**2.0%**	**3.5%**
Government appropriations						
Federal	3.2%	0.0%	2.4%	0.0%	-0.8%	0.0%
State	63.3%	65.8%	62.1%	59.0%	-1.2%	-6.8%
Local	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government grants and contracts						
Federal	4.4%	0.0%	4.4%	2.4%	0.1%	2.4%
State	0.3%	0.0%	1.3%	0.0%	0.9%	0.0%
Local	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Private gifts, grants and contracts	**1.2%**	**0.1%**	**2.1%**	**0.8%**	**0.9%**	**0.7%**
Endowment income	**0.1%**	**0.0%**	**0.3%**	**0.0%**	**0.2%**	**0.0%**
Other sources	**5.3%**	**0.6%**	**3.3%**	**0.7%**	**-2.0%**	**0.1%**
TOTAL*	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* Excludes sales and services of educational activities, auxiliary enterprises, hospitals and independent operations.

UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY (UMDNJ)

The University of Medicine and Dentistry of New Jersey (UMDNJ) is the state's public research university specializing in health sciences. The university encompasses four campuses. In addition to providing extensive opportunities for undergraduate, graduate, postgraduate, and continuing education in the health professions, UMDNJ also conducts research, provides direct patient care at University Hospital and numerous affiliated hospitals, and undertakes various community health service initiatives. (Hospital data are excluded from this report.) Educational costs are funded by the state, tuition and fees, and other sources.

UMDNJ's peer institutions are: the Medical University of South Carolina, University of Connecticut Medical and Dental Schools, University of Kansas Medical Center, University of Maryland Baltimore Professional Schools, and University of California San Francisco. These five peer institutions were selected in part because they are public, free-standing, medical schools with budgets that are separate from affiliated universities.

UMDNJ spent a total of $9,164 (15%) less per fall headcount student[13] than did its peer institutions (**Table um1**). Lower spending in the academic category ($8,724 less per student) accounts for most of this difference. UMDNJ spent somewhat more than its peers in the support area, and somewhat less on scholarships and fellowships and "other" expenditures.

Table um1:
Components of FY 1994 Unrestricted E & G Expenditures per Student:
UMDNJ vs. Peer Institutions

	Peers	UMDNJ-Unadj.	UMDNJ-Adj.
Subtotal, academic area	**$36,206**	**$30,501**	**$27,482**
Instruction	$31,891	$30,501	$27,482
Research*	$3,797	n/a	n/a
Public service*	$517	n/a	n/a
Subtotal, support area	**$17,112**	**$19,819**	**$17,857**
Academic support	$3,604	$3,080	$2,775
Student services	$813	$1,248	$1,125
Institutional support	$7,377	$7,481	$6,740
Operation/maintenance of plant	$5,317	$8,010	$7,217
Scholarships & fellowships	**$951**	**$683**	**$615**
Other	**$5,238**	**$4,871**	**$4,389**
TOTAL	**$59,507**	**$55,875**	**$50,343**

* Comparable UMDNJ expenditures for research and public service are reported in restricted funds.

Although UMDNJ's expenditure levels were lower than their peers', the distribution of expenditures among categories was somewhat similar. The academic area constituted more than half of all expenditures for UMDNJ and its peers (**Table um2**); the support area, however, comprised over one-third of expenditures for UMDNJ, but less for the peers. The academic area declined somewhat as a share for both UMDNJ and the peers over time, while the support area rose slightly for UMDNJ but declined somewhat for the peers during the five-year period.

Table um2:
Components of Unrestricted E & G Expenditures as Percentages of the Total:
UMDNJ vs. Peer Institutions

	FY 1989		FY 1994		Change	
	Peers	UMDNJ	Peers	UMDNJ	Peers	UMDNJ
Subtotal, academic area	**64.9%**	**58.9%**	**60.8%**	**54.6%**	**-4.1%**	**-4.3%**
Instruction	56.3%	58.9%	53.6%	54.6%	-2.7%	-4.3%
Research*	5.6%	n/a	6.4%	n/a	0.8%	n/a
Public service*	3.0%	n/a	0.9%	n/a	-2.1%	n/a
Subtotal, support area	**33.5%**	**33.9%**	**28.8%**	**35.5%**	**-4.8%**	**1.6%**
Academic support	7.3%	4.5%	6.1%	5.5%	-1.3%	1.1%
Student services	1.6%	1.4%	1.4%	2.2%	-0.2%	0.8%
Institutional support	14.7%	11.6%	12.4%	13.4%	-2.3%	1.8%
Operation/maintenance of plant	9.9%	16.4%	8.9%	14.3%	-1.0%	-2.1%
Scholarships & fellowships	**1.1%**	**1.1%**	**1.6%**	**1.2%**	**0.5%**	**0.1%**
Other	**0.5%**	**6.0%**	**8.8%**	**8.7%**	**8.3%**	**2.7%**
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* Comparable UMDNJ expenditures for research and public service are reported in restricted funds.

UMDNJ spent $14,027 (21%) less per student on employee compensation (including benefits) than its peer institutions, and this category comprised a smaller share of expenditures for UMDNJ than for the peer institutions (**Table um3**). The average salary for faculty at UMDNJ (excluding benefits) was 5.4% less than that of its peer institutions.

Table um3:
FY 1994 Employee Compensation (Restricted Plus Unrestricted Funds):
UMDNJ vs. Peer Institutions

	Peers	UMDNJ-Unadj.	UMDNJ-Adj.
Dollars per student enrolled	$65,438	$57,060	$51,411
% of total E & G expenditures	65.1%	54.8%	54.8%

Total research expenditures per full-time faculty member were $39,026 (49%) less for UMDNJ than for its peer institutions (**Table um4**). Public service expenditures per full-time faculty member were $42,106 more (or roughly 11 times as much) for UMDNJ, reflecting the institution's role as the state's largest provider of charity patient care.

Table um4:
FY 1994 Research and Public Service Expenditures per Fall 1993 Full-Time Faculty (Restricted Plus Unrestricted Funds): UMDNJ vs. Peer Institutions

	Peers	UMDNJ-Unadj.	UMDNJ-Adj.
Total Research	$79,360	$44,766	$40,334
Total Public Service	$3,748	$50,892	$45,854

UMDNJ, as compared with its peers, received a significantly greater share of its revenues from state government appropriations, and a slightly larger share from tuition and fees (**Table um5**). Tuition and fees rose over time as a share of revenues in both settings, although this trend was more significant among the peers than at UMDNJ. The share of state appropriations declined in both settings, but the peer institutions were considerably more affected than UMDNJ.

Table um5:
Sources of Unrestricted Revenues: UMDNJ vs. Peer Institutions

	FY 1989		FY 1994		Change	
	Peers	UMDNJ	Peers	UMDNJ	Peers	UMDNJ
Tuition and fees	7.3%	10.2%	10.5%	12.0%	3.2%	1.8%
Government appropriations						
Federal	0.0%	0.0%	0.2%	0.0%	0.2%	0.0%
State	76.4%	86.4%	63.2%	81.9%	-13.2%	-4.4%
Local	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government grants and contracts						
Federal	9.7%	0.0%	12.2%	0.0%	2.5%	0.0%
State	0.7%	0.0%	1.3%	0.0%	0.6%	0.0%
Local	0.4%	0.0%	0.1%	0.0%	-0.3%	0.0%
Private gifts, grants and contracts	1.5%	0.0%	4.2%	0.0%	2.7%	0.0%
Endowment income	1.3%	0.0%	2.5%	0.0%	1.2%	0.0%
Other sources	2.7%	3.4%	5.9%	6.1%	3.2%	2.7%
TOTAL*	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%

* Excludes sales and services of educational activities, auxiliary enterprises, hospitals and independent operations.

UMDNJ received no significant unrestricted government funding in the form of grants and contracts. In contrast, its peer institutions generated 13.6 percent of their FY 1994 revenue from federal, state, and local grants. The peers saw their percentage of revenue from federal grants increase from 9.7 percent to 12.2 percent between FY 1989 and FY 1994, and state grants also increased slightly.

Independent Four-Year Nondoctoral Institutions

New Jersey has nine four-year independent nondoctoral institutions with a public mission: Bloomfield College, Caldwell College, Centenary College, Felician College, Georgian Court College, Monmouth University, Rider University, The College of Saint Elizabeth, and Saint Peter's College. Upsala College, which closed in May 1995, is also included in the data for FY 1994 and previous years. These institutions offer a broad spectrum of baccalaureate and graduate programs. Educational costs are funded primarily by tuition and fees, although they also receive gifts and some state funding. Their peer group is composed of all regionally accredited independent four-year nondoctoral institutions that are non-profit and do not have an exclusively theological or other specialized mission.

New Jersey's independent four-year nondoctoral institutions spent about $1,292 (11%) less per FTE student[14] than did similar institutions throughout the nation (**Table in1**). Lower spending in the academic category accounts for slightly over one-third of this difference, with lower spending on the support category, scholarships and fellowships, and "other" expenditures also contributing.

Table in1:
Components of FY 1994 Unrestricted E & G Expenditures per FTE:
Independent Four-Year Nondoctoral Institutions

	US*	NJ-Unadj.	NJ-Adj.
Subtotal, academic area	**$3,994**	**$3,983**	**$3,525**
Instruction	$3,923	$3,949	$3,495
Research	$17	$21	$18
Public service	$54	$14	$12
Subtotal, support area	**$5,368**	**$5,870**	**$5,195**
Academic support	$838	$1,066	$944
Student services	$1,304	$1,438	$1,273
Institutional support	$2,113	$2,162	$1,914
Operation & maintenance of plant	$1,112	$1,204	$1,065
Scholarships & fellowships	**$1,897**	**$1,758**	**$1,555**
Other	**$589**	**$317**	**$281**
TOTAL	**$11,849**	**$11,928**	**$10,557**

* US data include New Jersey

The New Jersey institutions devoted almost one-half of their expenditures to the support area, which is a slightly larger proportion than among the peer institutions (**Table in2**). They devoted one-third of their expenditures to the academic area, mirroring their peers. The academic area declined slightly as a share both in New Jersey and in the nation during the five years from FY 1989 to FY 1994. During the same period, the support area remained constant in New Jersey, but saw a slight decline nationally. Spending on scholarships and fellowships increased in New Jersey and among the national peers, while "other" spending declined in New Jersey.

Table in2:
Components of Unrestricted E & G Expenditures as Percentages of the Total:
Independent Four-Year Nondoctoral Institutions

	FY 1989		FY 1994		Change	
	US*	NJ	US*	NJ	US*	NJ
Subtotal, academic area	**35.4%**	**35.5%**	**33.7%**	**33.4%**	**-1.7%**	**-2.1%**
Instruction	34.7%	35.3%	33.1%	33.1%	-1.6%	-2.2%
Research	0.2%	0.0%	0.1%	0.2%	0.0%	0.1%
Public service	0.5%	0.2%	0.5%	0.1%	-0.1%	0.0%
Subtotal, support area	**48.1%**	**49.3%**	**45.3%**	**49.2%**	**-2.8%**	**-0.1%**
Academic support	7.4%	8.6%	7.1%	8.9%	-0.3%	0.4%
Student services	10.6%	10.7%	11.0%	12.1%	0.4%	1.4%
Institutional support	19.3%	19.0%	17.8%	18.1%	-1.5%	-0.9%
Operation & maintenance of plant	10.8%	11.0%	9.4%	10.1%	-1.4%	-1.0%
Scholarships & fellowships	**10.9%**	**8.4%**	**16.0%**	**14.7%**	**5.2%**	**6.3%**
Other	**5.7%**	**6.8%**	**5.0%**	**2.7%**	**-0.7%**	**-4.2%**
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* US data include New Jersey.

New Jersey's nondoctoral independent colleges and universities spent about $484 (7%) less per FTE student on employee compensation (including benefits) than did their national peers (**Table in3**). This category comprised about one-half of expenditures both nationally and in New Jersey. The average salary for faculty (excluding benefits) was 1.4% less in New Jersey than at the peer institutions.

Table in3:
FY 1994 Employee Compensation (Restricted Plus Unrestricted Funds):
Independent Four-Year Nondoctoral Institutions

	US*	NJ-Unadj.	NJ-Adj.
Dollars per FTE enrolled	$6,838	$7,179	$6,354
% of total E & G expenditures	49.2%	50.7%	50.7%

* US data include New Jersey.

Tuition and fees are by far the largest source of revenue at both the New Jersey and the peer institutions, accounting for roughly the same share (**Table in4**). The share of revenue from tuition and fees increased in both settings. The New Jersey colleges received a greater share of revenue from state government appropriations than did their national peers; the New Jersey institutions also generated more revenue from state grants and contracts than their peers, although this funding declined from FY 1989 to FY 1994. The New Jersey institutions generate less revenue from endowment income and private gifts than their peers, and about the same amount from "other sources."

Table in4:
Sources of Unrestricted Revenues:
Independent Four-Year Nondoctoral Institutions

	FY 1989		FY 1994		Change	
	US*	NJ	US*	NJ	US*	NJ
Tuition and fees	**80.5%**	**79.6%**	**85.0%**	**85.7%**	**4.6%**	**6.0%**
Government appropriations						
Federal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
State	0.7%	5.3%	0.3%	4.8%	-0.4%	-0.5%
Local	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government grants and contracts						
Federal	0.3%	0.1%	0.3%	0.1%	-0.1%	0.0%
State	0.3%	4.2%	0.3%	1.3%	0.0%	-2.9%
Local	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Private gifts, grants and contracts	**9.1%**	**5.7%**	**7.5%**	**4.0%**	**-1.6%**	**-1.7%**
Endowment income	**5.1%**	**1.2%**	**3.6%**	**0.8%**	**-1.5%**	**-0.4%**
Other sources	**3.8%**	**3.9%**	**2.9%**	**3.4%**	**-0.9%**	**-0.5%**
TOTAL**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* US data include New Jersey.
** Excludes sales and services of educational activities, auxiliary enterprises, hospitals and independent operations.

INDEPENDENT DOCTORAL INSTITUTIONS

New Jersey has five independent doctoral institutions with a public mission: Drew University, Fairleigh Dickinson University, Princeton University, Seton Hall University, and Stevens Institute of Technology. These institutions offer a broad spectrum of baccalaureate, graduate, and doctoral programs. Educational costs are funded primarily by tuition and fees, although endowments, gifts, and federal funds also generate income and the state provides some funding. Their peer group is composed of all regionally accredited independent doctoral institution that are non-profit and do not have an exclusively theological or other specialized mission.

New Jersey's independent doctoral institutions spent about $3,959 (24%) less per headcount student[15] than did similar institutions throughout the nation (**Table id1**). Most of this difference is accounted for by lower spending in the academic category. The New Jersey institutions also spent less on scholarships and fellowships, but devoted roughly the same amount as their peers to the support category and "other" spending.

Table id1:
Components of FY 1994 Unrestricted E & G Expenditures per Student:
Independent Doctoral Institutions

	US*	NJ-Unadj.	NJ-Adj.
Subtotal, academic area	**$7,311**	**$4,415**	**$3,907**
Instruction	$6,652	$4,189	$3,707
Research	$135	$196	$174
Public service	$525	$30	$27
Subtotal, support area	**$6,316**	**$7,391**	**$6,541**
Academic support	$1,500	$1,621	$1,435
Student services	$953	$1,204	$1,065
Institutional support	$2,325	$2,966	$2,625
Operation & maintenance of plant	$1,537	$1,600	$1,416
Scholarships & fellowships	**$1,873**	**$1,271**	**$1,125**
Other	**$897**	**$978**	**$865**
TOTAL	**$16,397**	**$14,054**	**$12,438**

* US data include New Jersey

New Jersey institutions allocated slightly more than one-half of their expenditures to the support category, and slightly less than one-third to the academic category (**Table id2**). The peer institutions allocated a larger share of spending to the academic area and a smaller share to the support area. The academic area remained fairly constant as a share in both New Jersey and the nation during the five years from FY 1989 to FY 1994. During the same period, the support area increased slightly in New Jersey, but saw a small decline nationally.

Table id2:
Components of Unrestricted E & G Expenditures as Percentages of the Total:
Independent Doctoral Institutions

	FY 1989		FY 1994		Change	
	US*	NJ	US*	NJ	US*	NJ
Subtotal, academic area	**44.8%**	**30.8%**	**44.6%**	**31.4%**	**-0.2%**	**0.6%**
Instruction	41.4%	30.3%	40.6%	29.8%	-0.9%	-0.5%
Research	0.9%	0.4%	0.8%	1.4%	-0.1%	1.0%
Public service	2.4%	0.1%	3.2%	0.2%	0.8%	0.1%
Subtotal, support area	**41.0%**	**50.5%**	**38.5%**	**52.6%**	**-2.5%**	**2.1%**
Academic support	10.3%	9.9%	9.1%	11.5%	-1.2%	1.6%
Student services	5.7%	7.5%	5.8%	8.6%	0.1%	1.1%
Institutional support	14.8%	21.4%	14.2%	21.1%	-0.6%	-0.3%
Operation & maintenance of plant	10.2%	11.7%	9.4%	11.4%	-0.8%	-0.3%
Scholarships & fellowships	**8.4%**	**5.7%**	**11.4%**	**9.0%**	**3.0%**	**3.3%**
Other	**5.8%**	**13.0%**	**5.5%**	**7.0%**	**-0.3%**	**-6.0%**
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* US data include New Jersey.

Institutions in New Jersey spent about $3,295 (25%) less per student on employee compensation (including benefits) than did their national peers (**Table id3**). This category comprised over one-half of expenditures both nationally and in New Jersey. The average salary for faculty (excluding benefits) was 1.5% less in New Jersey than at the peer institutions.

Table id3:
FY 1994 Employee Compensation (Restricted Plus Unrestricted Funds):
Independent Doctoral Institutions

	US*	NJ-Unadj.	NJ-Adj.
Dollars per student enrolled	$13,337	$11,347	$10,042
% of total E & G expenditures	56.5%	55.8%	55.8%

* US data include New Jersey.

New Jersey institutions, relative to their national counterparts, spent $3,196 (6%) more per full-time faculty member on research (**Table id4**). They spent $12,449 (91%) less on public service.

Table id4:
FY 1994 Research and Public Service Expenditures per Fall 1993 Full-Time Faculty
(Restricted Plus Unrestricted Funds):
Independent Doctoral Institutions

	US*	NJ-Unadj.	NJ-Adj.
Total Research	$51,510	$61,815	$54,706
Total Public Service	$13,750	$1,470	$1,301

* US data include New Jersey.

Institutions in New Jersey, as compared with their peers, received a slightly larger share of their revenues from tuition and fees (almost three-fourths), increasing the amount of revenue from this source over the five-year period from FY 1989 to FY 1994 (**Table id5**). The New Jersey universities received a slightly smaller share of revenue from federal appropriations and a smaller share from federal grants and contracts. They received about the same share of revenue from state appropriations as their peer institutions did, but generated more funding from state grants and contracts, although the latter declined during the five-year period. Endowment income at New Jersey's independent doctoral institutions declined during the five-year period, placing them level with their national peers.

Table id5:
Sources of Unrestricted Revenues:
Independent Doctoral Institutions

	FY 1989		FY 1994		Change	
	US*	NJ	US*	NJ	US*	NJ
Tuition and fees	**68.0%**	**65.2%**	**71.4%**	**73.4%**	**3.4%**	**8.2%**
Government appropriations						
Federal	1.5%	0.0%	1.0%	0.0%	-0.4%	0.0%
State	1.8%	1.5%	1.0%	0.9%	-0.9%	-0.7%
Local	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Government grants and contracts						
Federal	7.0%	4.1%	6.6%	4.5%	-0.4%	0.4%
State	0.6%	3.2%	0.3%	1.1%	-0.3%	-2.1%
Local	0.2%	0.0%	0.3%	0.0%	0.1%	0.0%
Private gifts, grants and contracts	**6.9%**	**8.3%**	**7.0%**	**7.5%**	**0.1%**	**-0.8%**
Endowment income	**5.7%**	**8.1%**	**3.8%**	**3.7%**	**-2.0%**	**-4.4%**
Other sources	**8.3%**	**9.6%**	**8.8%**	**8.9%**	**0.5%**	**-0.7%**
TOTAL**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**

* US data include New Jersey.
** Excludes sales and services of educational activities, auxiliary enterprises, hospitals and independent operations.

CLOSING COMMENTS

New Jersey's vision for higher education reflects shared aspirations for a system of higher education that meets the needs of citizens and the state, embracing excellence, access, and affordability. Annual institutional and systemwide accountability reports are valuable tools for measuring progress toward that vision.

The data in this second systemwide report provide important information for discussions among the institutions, the Presidents' Council, boards of trustees, the Commission, and the broader higher education community, as well the Governor's staff and legislators. Discussions should focus on the fiscal resources for higher education, how those resources are spent, the impact of expenditures, and opportunities for improvement. The data in this report are not intended to answer policy questions regarding higher education spending and resource allocation, nor do they address the kind of system the state wishes to support. Rather, the data will help to inform discussions about the level of state support needed to achieve the excellent higher education system New Jerseyans desire. Similarly, institutions can use the report's comparative data to guide their future budgeting decisions, consistent with state and institutional goals.

The Commission will continue to issue annual accountability reports to policy makers and the public, refining the data and comparisons as benchmarking techniques are improved. The reports will provide the factual foundation necessary to inform policy and planning and to realize New Jersey's vision for higher education. Individual colleges and universities should build upon these state-level efforts by increasing their use of performance indicators and benchmarking in annual institutional accountability reports in order to measure progress toward their goals.

ENDNOTES

[1] U.S. General Accounting Office, Higher Education: Tuition Increasing Faster Than Household Income and Public Colleges' Costs (Washington, DC: USGAO, August 1996).

[2] National Center for Education Statistics, The Cost of Higher Education [Findings from The Condition of Education 1995, No.6] (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, May 1996).

[3] Halstead's System Support Index (SSI) was refined for FY 1996 and New Jersey's value was adjusted to 108 for that year.

[4] National Association of State Student Grant & Aid Programs, NASSGAP 26th Annual Survey Report, 1994-95 Academic Year (Albany, NY: New York State Higher Education Services Corp., February 1996), Table 13, p. 32.

[5] Excepting five FY 1996 indicators from Kent Halstead (in Figures 4 and 5 and Table s5), other data in this report are for FY 1994 or FY 1995. For those earlier years, New Jersey data involving absolute dollars were adjusted for the state's FY 1995 value (113) on Halstead's System Support Index (SSI), which accounts for a state's cost of living and the types and sizes of its institutions. Adjustment of the three FY 1996 absolute dollar indicators for the further refined SSI uses the different New Jersey value (108) that is reported by Halstead for that year.

[6] Listed below are the predictors in the multiple regression models used to generate the adjustments reflected in Figure 5.

1) Outmigration rate, fall 1994: from National Center for Education Statistics, Residence and Migration of First-Time Freshmen Enrolled in Higher Education Institutions: Fall 1994 (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, March 1996), Table 3, p. 3.

2) Inmigration rate, fall 1994: from National Center for Education Statistics, Residence and Migration of First-Time Freshmen Enrolled in Higher Education Institutions: Fall 1994 (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, March 1996), Table 3, p. 3.

3) % of all students systemwide who are attending private institutions, fall 1993: calculated from data presented in National Center for Education Statistics, Digest of Education Statistics 1995 (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, October 1995), Table 184, p. 191, and Table 186, p. 193.

4) % of public institutions' revenues from state and local government that are from the local level, FY 1993: calculated from data presented in National Center for Education Statistics, Digest of Education Statistics 1995 (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, October 1995), Table 324, p. 337.

5) Inclusion/exclusion of tuition revenues in/from higher education portion of state budgets: from National Association of State Budget Officers, 1995 State Expenditure Report (Washington DC: NASBO, April 1996), Table A-9, p. 80; for use only in adjusting % of state budgets devoted to higher education.

[7] The expenditure data for this analysis are from National Association of State Student Grant & Aid Programs, NASSGAP 26th Annual Survey Report, 1994-95 Academic Year (Albany, NY: New York State Higher Education Services Corp., February 1996), Table 13, p. 32. The FTE data, which are for fall 1994, are from National Center for Education Statistics, Digest of Education Statistics 1996 (Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, November, 1996), Table 198, p. 203.

[8] The expenditure, revenue, student, and faculty data analyzed in this section of the report are obtained from institutional reports to the Integrated Postsecondary Education Data System (IPEDS). Adjustments have been made to both revenues and expenditures to reflect spending by one level of government on behalf of another, particularly for fringe benefits, when not reported by institutions to IPEDS. Data were obtained

from the following IPEDS forms: "Finance Survey: FY 1994" and "Finance Survey: FY 1989" (IPEDS-F-1 and F-1A), "Institutional Characteristics Survey 1994-95" (IPEDS-IC-2), "Fall Enrollment Survey 1993" (IPEDS-EF-1), "Salaries, Tenure, and Fringe Benefits of Full-time Instructional Faculty Survey 1993-94" (IPEDS-SA), and "Fall Staff Survey 1993" (IPEDS-S).

[9] Comparisons are based on the number of full-time equivalent (FTE) students enrolled at institutions in fall 1993. FTE students are calculated according the methodology used by the U.S. Department of Education, National Center for Education Statistics.

[10] Comparisons are based on the number of student credit hours in the 1993-94 academic year (FY 1994).

[11] Comparisons are based on the actual number of students enrolled in fall 1993, regardless of their level or status as full- or part-time.

[12] See footnote 11.

[13] See footnote 11.

[14] Comparisons are based on the number of full-time equivalent (FTE) students enrolled at institutions in fall 1993. As in the case of public four-year nondoctoral institutions, FTE students are calculated according the methodology used by the U.S. Department of Education, National Center for Education Statistics.

[15] Comparisons are based on total headcount enrollment at institutions in fall 1993, as are the comparisons for public doctoral institutions.

APPENDIX A:

ADJUSTING COST FIGURES ON NEW JERSEY HIGHER EDUCATION

In comparing costs in New Jersey with those in the nation as a whole or in particular states, it is necessary to adjust for two factors: geographical differences in wages, and interstate differences in funding required as a result of the type and size of a state's higher education institutions. Research Associates of Washington DC (headed by Kent Halstead) measures wage differences with their Urban Cost of Living Index, and type and size differences with their System Design Index. By combining the two, they arrive at their System Support Index, which is used in this report to adjust New Jersey data.

All three indexes are designed so that the United States has a value of 100. New Jersey had values of 113 on the Urban Cost of Living Index, 100 on the System Design Index, and 113 on the System Support Index for the fiscal years referred to throughout most of the report. Therefore, for national comparisons this report in most cases adjusts the cost figures for this state by multiplying them by 100/113 or .885.

In those instances where the focus is on one particular sector, the System Design Index is not relevant. However, this point does not change the arithmetic, since that index is "neutral" (NJ=100).

The procedure just described is sufficient when one is comparing an entire sector (or more) with its counterparts throughout the nation. However, in the case of each of the public research universities this report uses a limited set of peers that matches up well with the institution in question but is not necessarily representative of the nation as a whole. In these instances the Urban Cost of Living Index value used for the peers (as a replacement for the US=100) is an unequally weighted average of the index values of the states in which the peers are located, with the weights consisting of the number of peer institutions in each state. An alternative way to describe this number is: an equally weighted average of the peer institutions themselves, with each institution described by the index value for the state in which it is located.

APPENDIX B:

Expenditure and Revenue Dollar Totals for Each New Jersey Institutional Sector, FY 1989 and FY 1994:
(in 1994 Constant Dollars*)

	Expenditures		Revenues		Enrollment Changes**
	FY 1989	FY 1994	FY 1989	FY 1994	'88 to '93
State college sector	$442,235,392	$462,684,530	$458,725,487	$466,957,552	3.0%
Community college sector	$399,528,039	$429,944,103	$404,951,495	$468,721,136	26.4%
Rutgers	$573,619,610	$587,797,000	$576,546,076	$595,483,000	0.5%
NJIT	$85,924,953	$88,423,000	$84,818,686	$89,089,000	-1.5%
UMDNJ	$197,376,675	$218,972,611	$197,376,678	$218,972,611	35.1%
Independent 4-year nondoctoral institutions	$173,004,451	$207,818,873	$165,963,430	$203,474,761	12.0%
Independent doctoral institutions***	$471,749,937	$464,091,912	$457,631,718	$461,256,219	-1.6%

* Current dollars converted to constant dollars using HEPI (Higher Education Price Index) from *Inflation Measures for Schools Colleges and Libraries, 1996 Update*, Research Associates of Washington, 1996. Inflation between 1989 and 1994 was 23.0% as measured by HEPI.

** Changes in total headcounts from fall 1988 (1988-89 academic year) to fall 1993 (1993-94 academic year); totals include full- and part-time students at all levels.

*** The decline between 1989 and 1994 in expenditures by the independent doctoral institutions as a group reflects primarily, but not entirely, the closing of one campus and the dental school of Fairleigh Dickinson University.

NOTE: The revenue and expenditure totals in this table represent slightly different subsets of total dollars, and therefore are not expected to "balance."

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